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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------------|------------------|
| 09/867,049 | 05/29/2001 | Kai Nyman | 944-006.006-1 | 7666 |
| 4955 7590 04/18/2007 WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP BRADFORD GREEN, BUILDING 5 755 MAIN STREET, P O BOX 224 MONROE, CT 06468 | | | EXAMINER DAVIS, ZACHARY A | |
| | | | ART UNIT 2137 | PAPER NUMBER |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 09/867,049 | | NYMAN ET AL. | |
| | Examiner | | Art Unit | |
| | Zachary A. Davis | | 2137 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14,25-31,35 and 37-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14,25-31,35 and 37-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A pre-appeal brief request for review was received on 21 December 2006. As per the notice of panel decision mailed 01 February 2007, as a result of the pre-appeal brief review conference, the previous rejections have been withdrawn and prosecution has been reopened in the present application.
2. Claims 1-14, 25-31, 35, and 37-54 are currently pending in the present application.

Response to Arguments

3. As noted above, Applicant's arguments, see the pre-appeal brief request for review, filed 21 December 2006, with respect to the rejection of claims 1-14, 25-31, 35, and 37-54 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection are made in view of other cited prior art. See below for further details.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-10, 13, 14, 25-31, 35, 37-47, and 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berggren, WIPO Publication WO00/44130, in view of Turtiainen, US Patent 6430407, and Bilgic et al, US Patent 6097817 (previously cited in the Office action mailed 22 December 2004).

In reference to Claim 1, Berggren discloses a method for authenticating including receiving a subscriber identity at a client from a mobile station (page 13, lines 17-20; page 16, lines 23-27), sending the identity from the client to an authentication block of a network (page 13, lines 20-23; page 16, lines 15-31), receiving at the client a first secret and a challenge from the authentication block (page 12, line 35-page 13, line 12; page 16, lines 38-32), sending the challenge to a subscriber identity module, receiving a response to the challenge at the client, and authenticating the client (page 13, lines 17-32; page 17, lines 7-22). However, Berggren does not explicitly disclose that the client is mobile.

Turtiainen discloses a method for authenticating a mobile client to a communication system including receiving a subscriber identity from a mobile station (column 9, lines 29-37 and 45-49) where a mobile telecommunication network is separate from the communication system to which the mobile client is being authenticated (column 8, lines 1-7), sending the subscriber identity, receiving a challenge and a secret, and using a response to the challenge and the secret to authenticate the client (column 10, lines 22-39). Turtiainen further discloses the mobile

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client and mobile station communicating directly (column 10, lines 51-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Berggren to include the features taught by Turtiainen, in order to free a user from the need to carry a separate authentication device or many different authentication devices (see column 5, lines 20-42).

Although Berggren and Turtiainen disclose a challenge response protocol for authenticating the user (Turtiainen, column 10, lines 22-39), neither Berggren nor Turtiainen explicitly discloses a second secret being used as the response to the challenge, the second secret being used to authenticate the client. Bilgic discloses an authentication protocol to be used in a wireless network (see column 1, lines 7-10; see also column 30, lines 32-53), where subscriber information and a first secret are stored in a subscriber identity module in a mobile station (column 30, lines 38-43), and where a challenge is provided to the mobile station and the mobile station provides a second secret in response to the challenge and the second secret is used for authenticating (column 30, line 54-column 31, line 5; column 31, lines 32-48; Figure 18, where the challenge is the random number RAND and the second secret is the signed response SRES). Therefore, it would have been obvious to one of ordinary skill in the art to modify the method of Berggren and Turtiainen by including the specific challenge response protocol disclosed by Bilgic, in order to further provide authentication and security in a mobile or wireless communication system (see Bilgic, column 4, lines 60-63).

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In reference to Claims 2, 3, and 8, Berggren, Turtiainen, and Bilgic further disclose receiving a personal identification number or PIN (see Turtiainen, column 10, lines 26-30; Berggren, page 12, lines 12-17, and page 12, line 35-page 13, line 12) and encrypting the PIN (Turtiainen, column 9, line 66-column 10, line 9).

In reference to Claims 4 and 5, Berggren, Turtiainen, and Bilgic further disclose encrypting and transmitting the response (see Turtiainen, column 10, lines 6-9).

In reference to Claims 6 and 7, Berggren, Turtiainen, and Bilgic further disclose that the transmissions and receptions are performed wirelessly (Turtiainen, column 6, lines 18-25).

In reference to Claims 9 and 10, Berggren, Turtiainen, and Bilgic further disclose that the wireless transmissions can use an infrared signal or a radio signal (Turtiainen, column 10, lines 51-55).

In reference to Claim 25, Berggren discloses a method including retrieving a subscriber identity from a subscriber identity module in a mobile station (page 13, lines 17-20; page 16, lines 23-27), wirelessly sending the subscriber identity from the mobile station to a client for authentication (page 13, lines 17-20; page 16, lines 23-27), wirelessly receiving at the mobile station a challenge from the client (page 12, line 35-page 13, line 12; page 16, lines 38-32), generating a response to the challenge at the mobile station, and wirelessly sending the response from the mobile station to the client (page 13, lines 17-32; page 17, lines 7-22). However, Berggren does not explicitly disclose that the client is mobile.

Turtiainen discloses a method including retrieving and sending a subscriber identity (column 9, lines 29-37 and 45-49), receiving a challenge, and generating and sending a secret in response to the challenge (column 10, lines 22-39). Turtiainen further discloses the mobile client and mobile station communicating directly (column 10, lines 51-56) but that a mobile telecommunication network is distinct from the communication system to which the mobile client is being authenticated (column 8, lines 1-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Berggren to include the features taught by Turtiainen, in order to free a user from the need to carry a separate authentication device or many different authentication devices (see column 5, lines 20-42).

Although Berggren and Turtiainen disclose a challenge response protocol for authenticating the user (Turtiainen, column 10, lines 22-39), neither Berggren nor Turtiainen explicitly discloses a secret being used as the response to the challenge, the secret being used to authenticate the client. Bilgic discloses an authentication protocol to be used in a wireless network (see column 1, lines 7-10; see also column 30, lines 32-53), where subscriber information is stored in a subscriber identity module in a mobile station (column 30, lines 38-43), and where a challenge is provided to the mobile station and the mobile station provides a secret in response to the challenge and the secret is used for authenticating (column 30, line 54-column 31, line 5; column 31, lines 32-48; Figure 18, where the challenge is the random number RAND and the secret is the signed response SRES). Therefore, it would have been obvious to one of ordinary skill in the art to modify the method of Berggren and Turtiainen by including the specific

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challenge response protocol disclosed by Bilgic, in order to further provide authentication and security in a mobile or wireless communication system (see Bilgic, column 4, lines 60-63).

In reference to Claims 26, 27, 28, and 29, Berggren, Turtiainen, and Bilgic further disclose receiving a request containing an encrypted PIN and confirming the PIN (see Turtiainen, column 9, line 66-column 10, line 9; and column 10, lines 22-39).

Claims 13, 14, 30, and 31 are apparatus claims corresponding substantially to the methods of Claims 1, 2, 25, and 26, respectively, and are rejected by a similar rationale.

Claim 35 is directed to software implementations of the method of Claim 7, and is rejected by a similar rationale. Similarly, Claim 37 is directed to a software implementation of the method of Claim 25, and is rejected by a similar rationale.

Claims 38-47 and 50-54 are apparatus claims corresponding substantially to the methods of Claims 1-10 and 25-29, respectively, and are rejected by a similar rationale. Claims 38, 39, 50, and 51 also correspond substantially to the apparatus of Claims 13, 14, 30, and 31, respectively.

6. Claims 11, 12, 48, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berggren in view of Turtiainen and Bilgic as applied to claims 8 and 45 above, and further in view of Lightman et al, US Patent 6711414.

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In reference to Claims 11 and 12, Berggren as modified above discloses everything as applied to Claim 8 above. Berggren, Turtiainen, and Bilgic also disclose that the wireless transmissions can have any "suitable operational connection" (see Turtiainen, column 10, lines 53-54); however, none of Berggren, Turtiainen, and Bilgic explicitly discloses the use of a low power radio signal or an acoustic signal for the wireless transmissions.

Lightman discloses a wireless communication apparatus that can transmit wireless signals using an infrared signal, a Bluetooth (low power radio) signal, a radio frequency signal, or an acoustic signal (column 6, lines 36-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method of Berggren as modified above to use a low power radio signal or acoustic signal for the wireless transmissions, in order to allow the wireless communication devices to easily transmit to and receive from other devices, and to allow the wireless devices to interact with other devices and their surroundings (see Lightman, column 3, lines 19-28).

Claims 48 and 49 are apparatus claims corresponding substantially to the methods of Claims 11 and 12, and are rejected by a similar rationale.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary A. Davis whose telephone number is (571) 272-

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3870. The examiner can normally be reached on weekdays 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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